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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* JORGE SANCHEZ and FERDINAND POLIDO

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Appeal 2008-003567  
Application 10/721,617  
Technology Center 1700

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Decided:<sup>1</sup> June 18, 2009

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Before BRADLEY R. GARRIS, TERRY J. OWENS, and  
MICHAEL P. COLAIANNI, *Administrative Patent Judges*.

OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL  
STATEMENT OF THE CASE

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<sup>1</sup> The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, begins to run from the Decided Date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

The Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1, 3-5, 7-16, 18-20 and 22-39, which are all of the pending claims. We have jurisdiction under 35 U.S.C. § 6(b).

*The Invention*

The Appellants claim a modeling compound and a process for making it. Claims 1 and 20 are illustrative:

1. A modeling compound comprising, in combination,  
  
polyvinyl chloride resin;  
  
primary plasticizer;  
  
epoxidized soybean oil secondary plasticizer;  
  
a heat stabilizer comprising zinc;  
  
dry expanded microspheres;  
  
glass microspheres; and  
  
rheology modifier, wherein the modeling compound comprises .3% or less of water.
20. A process for forming a modeling compound, comprising,  
  
mixing a polyvinyl chloride resin, a primary plasticizer, a secondary plasticizer and a stabilizer to a smooth liquid consistency to create a mixture;  
  
adding rheology modifier; and thereafter adding and mixing microspheres to said mixture.

*The References*

Giessler	3,627,707	Dec. 14, 1971
Clas	3,917,550	Nov. 4, 1975
Vnishnevskaya (SU '036)	SU 907036	Feb. 23, 1982
Davey	4,797,314	Jan. 10, 1989
Miller	5,506,280	Apr. 9, 1996
Christy	5,607,993	Mar. 4, 1997
Gerace	5,658,969	Aug. 19, 1997

Andrey I. Nikiforov, *Preliminary Risk Characterization for Acetyl Tributyl Citrate Used as a Plasticizer in Polyvinyl Chloride Children's Toys* 1-11 (Morflex, Feb. 1999) (hereafter Nikiforov).

*The Rejections*

The claims stand rejected as follows:

1. claims 1, 3-5, 7-16, 18-20 and 22-39 under 35 U.S.C. § 112, first paragraph, written description requirement;
2. claims 1, 3-5, 7-16, 18-20, 22-30, 33 and 35-37 under 35 U.S.C. § 103 over Gerace in view of Giessler or Clas;
3. claims 31 and 39 under 35 U.S.C. § 103 over Gerace in view of Giessler or Class, further in view of Nikiforov;
4. claims 32, 34 and 38 under 35 U.S.C. § 103 over Gerace in view of Giessler or Clas, further in view of Davey;
5. claims 1, 3, 7, 8, 20, 22, 25, 27-30 and 33 under 35 U.S.C. § 103 over SU '036 in view of Christy or Miller, further in view of Giessler;
6. claim 31 under 35 U.S.C. § 103 over SU '036 in view of Christy or Miller, further in view of Giessler and Nikiforov;

7. and claim 32 under 35 U.S.C. § 103 over SU '036 in view of Christy or Miller, further in view of Giessler and Davey.

### OPINION

We affirm the Examiner's rejections.

*Rejection of claims 1, 3-5, 7-16, 18-20 and 22-39  
under 35 U.S.C. § 112, first paragraph,  
written description requirement*

#### *Issue*

Have the Appellants shown reversible error in the Examiner's determination that the Appellants' original disclosure fails to provide adequate written descriptive support for "epoxidized soybean oil secondary plasticizer" in claim 1, "1% - 3% epoxidized soybean oil by weight of the compound" in claim 9, "thereafter adding and mixing microspheres to said mixture" in claim 20, and "acetyltributyl citrate" in claims 31 and 39?

#### *Analysis*

For an applicant to comply with the 35 U.S.C. § 112, first paragraph, written description requirement, the applicant's specification must "convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention." *Carnegie Mellon University v. Hoffmann-La Roche Inc.*, 541 F.3d 1115, 1122 (Fed. Cir. 2008) (quoting *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64 (Fed. Cir. 1991)).

The Examiner argues that because the Appellants' original Specification discloses epoxidized soybean oil as a heat stabilizer, not as a secondary plasticizer, there is inadequate written descriptive support for

“epoxidized soybean oil secondary plasticizer” in claim 1; and because the originally-disclosed amount of heat stabilizer is 1-2% (Spec. 4:35), there is inadequate written descriptive support for “1% - 3% epoxidized soybean oil” in claim 9 (Ans. 5).

The Appellants argue that epoxidized soybean oil has common and widespread use in the polymer industry as both a plasticizer and a heat stabilizer and that, therefore, one of ordinary skill in the art would reasonably conclude that the inventor, by mentioning epoxidized soybean oil as a heat stabilizer, also contemplated its use as a secondary plasticizer (Br. 7).

The Appellants have not established that at the time of the Appellants’ invention, whenever one of ordinary skill in the art used epoxidized soybean oil as a heat stabilizer, that person also was using it as a plasticizer. Hence, the Appellants have not established that the Appellants’ disclosure of epoxidized soybean oil as a heat stabilizer shows possession of epoxidized soybean oil as a plasticizer.

The Examiner argues that the Appellants’ original disclosure does not provide adequate written descriptive support for adding the microspheres after the other components in claim 20 but, rather, indicates that the rheology modifier is added last (Spec. 7:14-15) (Ans. 5-6).

The Appellants argue that the disclosure in the original Specification that “[o]ver mixing can degrade the micorspheres [sic] and generate excessive heat which degrades the final product and shortens its shelf life” (Spec. 7:12-13) is an inherent disclosure that the microspheres should be added after the other ingredients (Br. 7).

The Appellants' original Specification discloses problems caused by overmixing, but does not disclose avoiding overmixing by adding the microspheres last rather than by another technique such as brief or gentle mixing. Instead, the original Specification states that the rheology modifier is added last (Spec. 7:14-15). The Appellants, therefore, have not established that the original disclosure shows possession of a mixing sequence wherein the microspheres are added after the other components in claim 20.

The Examiner argues that the Appellants' original Specification does not disclose acetyltributyl citrate (Ans. 8).

The Appellants argue, in reliance upon Nikiforov, that acetyltributyl citrate was a well-known plasticizer when the Appellants' application was filed (Br. 8).

Even if acetyltributyl citrate was a well-known plasticizer, the Appellants have not shown possession of that particular plasticizer as part of the Appellants' invention.

#### *Conclusion of Law*

The Appellants have not shown reversible error in the Examiner's determination that the Appellants' original disclosure fails to provide adequate written descriptive support for "epoxidized soybean oil secondary plasticizer" in claim 1, "1% - 3% epoxidized soybean oil by weight of the compound" in claim 9, "thereafter adding and mixing microspheres to said mixture" in claim 20, and "acetyltributyl citrate" in claims 31 and 39.

*Rejection of claims 1, 3-5, 7-16, 18-20, 22-30, 33  
and 35-37 under 35 U.S.C. § 103 over Gerace  
in view of Giessler or Clas*

*Issue*

Have the Appellants shown reversible error in the Examiner's determination that the applied references would have rendered prima facie obvious, to one of ordinary skill in the art, a modeling compound comprising epoxidized soybean oil and 0.3% or less of water?

*Findings of Fact*

The Examiner relies upon Gerace, which discloses a microsphere-containing plastisol (col. 1, ll. 5-8), for a disclosure of each of the Appellants' modeling compound components except epoxidized soybean oil plasticizer, for which the Examiner relies upon Giessler's Table IV and Clas's column 4, lines 21-30, and a zinc-containing stabilizer, for which the Examiner relies upon Giessler's Table III (Ans. 6-9). For the amounts of the Appellants' components the Examiner relies upon Gerace's examples, Clas's claim 1 and Giessler's Table III (Ans. 9).

*Analysis*

The Appellants argue that the applied references do not contain a suggestion to combine them (Br. 9).

The Examiner has provided a motivation to combine the references (Ans. 17), and the Appellants have not addressed the Examiner's argument and explained why the motivation relied upon by the Examiner is inadequate.



The Appellants argue that the Examiner's reliance upon Gerace, Giessler and Clas is improper because they disclose plastisols rather than modeling compounds (Br. 9).

The Examiner relies upon Gerace's examples as showing that the plastisols are a thick paste and, therefore, are capable of being used as a modeling compound (Ans. 18). The Appellants have not explained why the Examiner is incorrect.

The Appellants argue that Gerace does not contemplate epoxidized soybean oil (Br. 9).

For a disclosure of epoxidized soybean oil the Examiner relies upon Giessler's Table IV and Clas's column 4, lines 21-30 (Ans. 8).

The Appellants argue that Gerace does not contemplate 0.3% or less of water (Br. 9).

The Examiner relies upon Gerace's lack of a disclosure that the composition contains water as an indication that the composition has virtually no water (Ans. 9), and the Appellants have not established that the Examiner is incorrect.

The Appellants argue, regarding claim 20, that adding the microspheres after the other components avoids overmixing (Br. 10).

The Appellants' Specification discloses that overmixing can degrade the microspheres and the final product, but does not disclose that the solution to the overmixing problem is to add the microspheres last rather than using another technique such as brief or gentle mixing. The Appellants have provided mere attorney argument to that effect, and such arguments of counsel cannot take the place of evidence. *See In re De Blauwe*, 736 F.2d 699, 705 (Fed. Cir. 1984). Moreover, the Appellants' argument is

inconsistent with the Appellants' disclosure that the rheology modifier is added last (Spec. 7:14-15). Hence, the Appellants have not shown error in the Examiner's determination that selecting any order of mixing, including that recited in the Appellants' claim 20, would have been prima facie obvious to one of ordinary skill in the art (Ans. 13).

*Conclusion of Law*

The Appellants have not shown reversible error in the Examiner's determination that the applied references would have rendered prima facie obvious, to one of ordinary skill in the art, a modeling compound comprising epoxidized soybean oil and 0.3% or less of water.

*Rejection of claims 31 and 39 under 35 U.S.C. § 103  
over Gerace in view of Giessler or Class,  
further in view of Nikiforov*

The Appellants do not separately argue claims 31 and 39 (Br. 8-11). Therefore, claim 31 falls with claim 1 from which it depends and claim 39 falls with claim 9 from which it depends.

*Rejection of claims 32, 34 and 38 under 35 U.S.C. § 103  
over Gerace in view of Giessler or Clas,  
further in view of Davey*

*Issue*

Have the Appellants shown reversible error in the Examiner's determination that the applied references would have rendered prima facie obvious, to one of ordinary skill in the art, a modeling compound comprising an organophilic clay?

*Findings of Fact*

Davey discloses a surface covering polyvinyl chloride resin paste comprising organophilic clay as a thixotropic material (col. 1, ll. 6-10; col. 3, l. 65 – col. 4, l. 1; col. 4, ll. 21-25).

*Analysis*

The Appellants argue that the Examiner's reliance upon Davey is improper because Davey is directed toward a surface covering compound, not a modeling compound (Br. 10).

The Examiner argues that Gerace discloses thixotropic agents other than organophilic clay, and that one of ordinary skill in the art would have used Davey's organophilic clay as Gerace's thixotropic agent because it would function similarly as a thixotropic agent regardless of whether the polyvinyl chloride resin is that of Davey or Gerace (Ans. 19-20).

The Appellants have not addressed the Examiner's argument and explained why it is incorrect. Hence, we are not convinced of error in the Examiner's argument.

*Conclusion of Law*

The Appellants have not shown reversible error in the Examiner's determination that the applied references would have rendered *prima facie* obvious, to one of ordinary skill in the art, a modeling compound comprising an organophilic clay.

*Rejection of claims 1, 3, 7, 8, 20, 22, 25, 27-30 and 33  
under 35 U.S.C. § 103 over SU '036 in view of  
Christy or Miller, further in view of Giessler*

*Issue*

Have the Appellants shown reversible error in the Examiner's determination that the applied references are combinable to have rendered prima facie obvious, to one of ordinary skill in the art, a modeling compound comprising 0.3% or less of water?

*Findings of Fact*

SU '036 discloses a modeling compound comprising 67-75 wt% polyvinyl chloride, 16-20 wt% dioctyl phthalate, 2-5 wt% paraffin, 1-11 wt% calcium oxide, remainder filler (p. 2).

Christy discloses a borosilicone rubber low density bouncing putty containing lightweight additives including glass and ceramic microspheres to provide satisfactory handling properties (col. 1, ll. 10-12; col. 4, ll. 35-48).

Miller discloses a modeling dough composition comprising gelled poly(vinyl alcohol) and a filler which can be hollow microspheres (col. 1, ll. 14-17; col. 4, ll. 36-39).

*Analysis*

The Appellants argue that the use of Giessler is improper for the reason given with respect to the rejection over Gerace in view of Giessler or Clas (Br. 10).

As explained above regarding that rejection, we are not persuaded by the Appellants' argument.

The Appellants argue that the use of Christy is improper because it is directed to bouncing putty rather than a modeling compound (Br. 10).

The Examiner argues that the compositions of SU '036 and Christy are sufficiently similar that one of ordinary skill in the art would have used Christy's hollow microspheres as the SU '036 filler (Ans. 11-12, 20).

The Appellants have not addressed the Examiner's argument and explained why it is incorrect. Moreover, it appears that Miller's disclosure that hollow microspheres, talc and calcium carbonate are workable fillers in Miller's modeling dough (col. 4, ll. 36-38) would have indicated to one of ordinary skill in art, through no more than ordinary creativity, that hollow microspheres would be a suitable alternative to the SU '036 talc and chalk (which is mostly calcium carbonate) fillers (p. 2). *See KSR Int'l. Co. v. Teleflex Inc.*, 550 U.S. 398, 417-418 (2007) (In making an obviousness determination one "can take account of the inferences and creative steps that a person of ordinary skill in the art would employ").

The Appellants argue that SU '036, Christy and Miller do not disclose the Appellants' recited percentages of polyvinyl chloride (Br. 11).

As pointed out by the Examiner (Ans. 20-21), the claims that recite a percentage of polyvinyl chloride are not rejected over SU '036 in combination with Christy, Miller and Giessler.

The Appellants argue that Miller's disclosure of a preferred water content of about 43 to about 49 wt% (col. 4, ll. 56-58) is a teaching away from the Appellants' water content of 0.3% or less (Br. 11).

The Examiner argues that the components of the SU '036 composition are dry components and that, therefore, the composition has virtually no water, and that the composition is heated to a high temperature which would remove water (Ans. 12). The Examiner argues that Miller was relied upon

only for a disclosure of microspheres, not for a disclosure of water content (Ans. 21).

The Appellants have not addressed the Examiner's argument and explained why it is in error.

*Conclusion of Law*

The Appellants have not shown reversible error in the Examiner's determination that the applied references are combinable to have rendered prima facie obvious, to one of ordinary skill in the art, a modeling compound comprising 0.3% or less of water.

*Rejections under 35 U.S.C. § 103 of claim 31 over  
SU '036 in view of Christy or Miller, further in  
view of Giessler and Nikiforov, and claim 32  
over SU '036 in view of Christy or Miller,  
further in view of Giessler and Davey*

The Appellants do not separately argue the rejections under 35 U.S.C. § 103 of claim 31 over SU '036 in view of Christy or Miller, further in view of Giessler and Nikiforov, and claim 32 over SU '036 in view of Christy or Miller, further in view of Giessler and Davey (Br. 11).

Therefore, claims 31 and 32 fall for the reason given above regarding claim 1 from which they depend.

DECISION/ORDER

The rejections of claims 1, 3-5, 7-16, 18-20 and 22-39 under 35 U.S.C. § 112, first paragraph, written description requirement, claims 1, 3-5, 7-16, 18-20, 22-30, 33 and 35-37 under 35 U.S.C. § 103 over Gerace in view of Giessler or Clas, claims 31 and 39 under 35 U.S.C. § 103 over Gerace in view of Giessler or Class, further in view of Nikiforov, claims 32,

34 and 38 under 35 U.S.C. § 103 over Gerace in view of Giessler or Clas, further in view of Davey, claims 1, 3, 7, 8, 20, 22, 25, 27-30 and 33 under 35 U.S.C. § 103 over SU '036 in view of Christy or Miller, further in view of Giessler, claim 31 under 35 U.S.C. § 103 over SU '036 in view of Christy or Miller, further in view of Giessler and Nikiforov, and claim 32 under 35 U.S.C. § 103 over SU '036 in view of Christy or Miller, further in view of Giessler and Davey are affirmed.

It is ordered that the Examiner's decision is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED

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